CORHIO

Colorado Regional
Health Information
Organization

A Presentation of the
Colorado Health Institute
1576 Sherman Street,
Suite 300
Denver, Colorado
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CORHIO
Colorado's Strategy to Achieve Statewide Interoperability

Colorado's context

- Colorado culture –
  - Preference for the market over government solutions
  - Diverse geography with changing demographics
  - A decade of severe state budget constraints
  - Majority small employers
- Health and health care
  - Highly competitive health care systems
  - Rising uninsured (17%)
  - Worrisome health statistics
- HIT and interoperability
  - Politics and finances breed resourcefulness
  - Federated approach required
- Emerging opportunities
  - Early HIE leadership
  - National initiatives
  - Focus on state level HIE
  - Colorado policy environment (executive branch, legislature, agencies)
  - Colorado stakeholder engagement

HIE chronology

CORHIO — Colorado Regional Health Information Organization

Early HIE efforts
- Provider HIT investments
- Local grant and contract-funded HIE projects (local RHIOs)

2004
- Federal agenda launched
- RHIO emerges as a construct
- **AHRQ SRD contract awarded (COHIE)**

2004-5
- Stakeholders endorse vision for statewide HIE
- CORHIO Steering Committee deliberates and calls for statewide RHIO

2006
- CO participates in national HIE efforts (AHIC, HISPC, CCHIT, SLHIE) and state level initiatives (e.g. DOQ-IT, IPIP)
- CORHIO market analysis
- Stakeholders endorse establishing CORHIO as 501(c)(3)
- Governance model developed, Board of Directors solicited

2007
- National context evolves (quality, transparency, privacy and security)
- State-level HIE grows (states, models)
- **CORHIO incorporated 3/07** (Implementation launches: Board, privacy/security, business plan)

Colorado's HIE vision

- ## Standardize
  - Avoid investments that perpetuate limited health care information exchange
  - Establish technical standards (both content and message) based on open architecture.

- ## Community of trust
  - Focus on the needs of all Coloradans
  - Balance propriety interests
  - Support secure HIE to support care of individuals and communities

- ## Shared investments
  - Build a common, central, web-based service that costs less than individual organization technology solutions
  - Maximize return on investments (optimize shared use of technical components)

- ## Non-profit service organization
  - Reduce additional health care system costs through a cost-based model
  - Structure variable participant fees to create cross-subsidies and ensure inclusiveness

Approach to interoperability

- Leverage point of care clinical data exchange (AHRQ contract) to build collaborative governance and statewide HIE infrastructure
- Add additional services of value to constituents based on established collaborative governance and infrastructure
- Optimize CORHIO implementation and level of participation by building upon community and provider affiliations, capacities and approach
- Imbed privacy architecture consistent with the Connecting for Health policy and technical models
- Position Colorado for interstate and nationwide HIE deployment

CORHIO architecture

CORHIO's Central includes:

Hardware (computers):
- Hosted secure facility with technical support,
- Redundant servers
- Server maintenance

Telecommunications (connections):
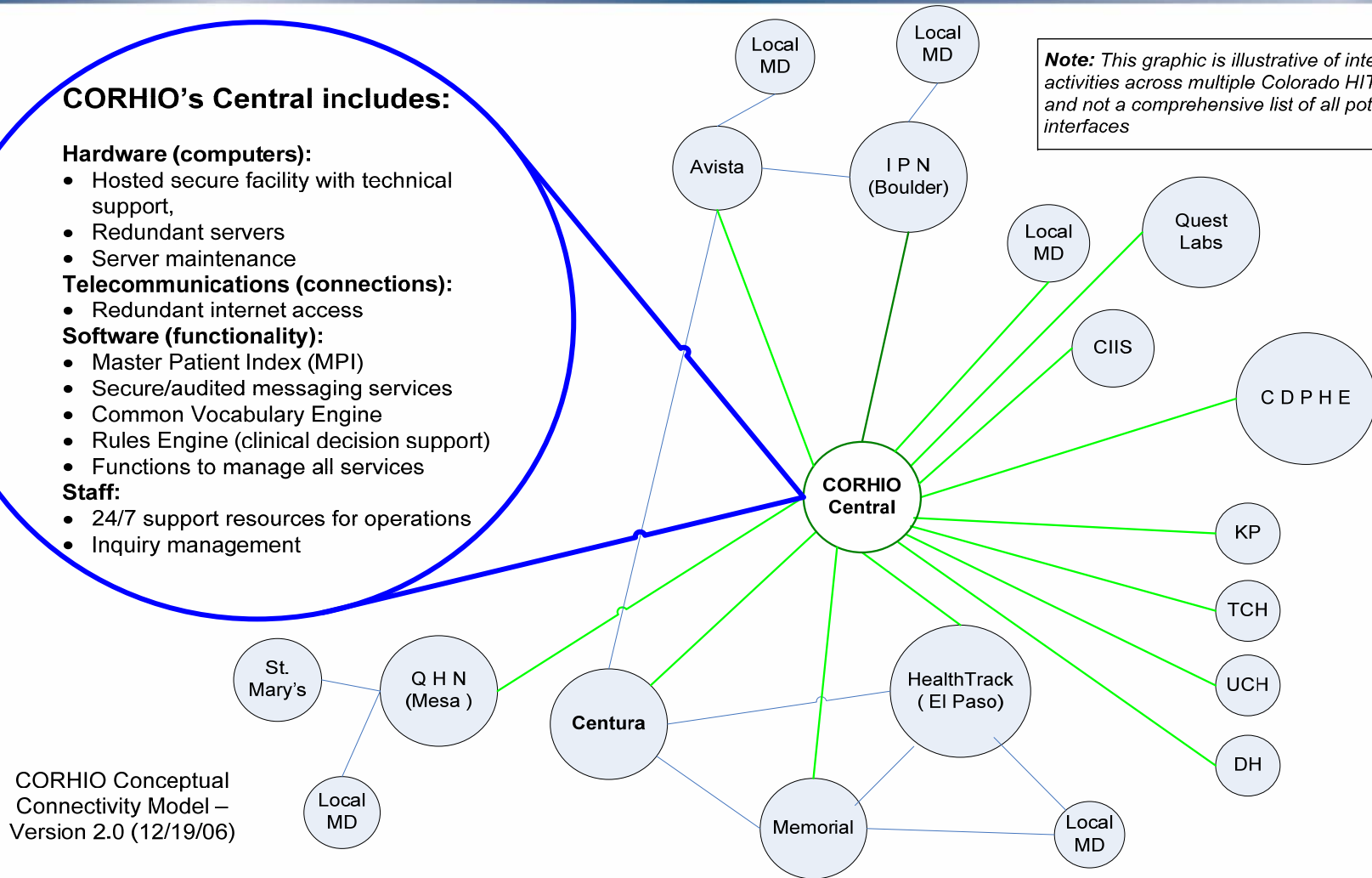- Redundant internet access

Software (functionality):
- Master Patient Index (MPI)
- Secure/audited messaging services
- Common Vocabulary Engine
- Rules Engine (clinical decision support)
- Functions to manage all services

Staff:
- 24/7 support resources for operations
- Inquiry management

Note: This graphic is illustrative of interfacing activities across multiple Colorado HIT projects and not a comprehensive list of all potential interfaces

Local MD

Local MD

Avista

I P N (Boulder)

Local MD

Quest Labs

CIIS

C D P H E

CORHIO Central

KP

TCH

UCH

DH

St. Mary's

Q H N (Mesa)

Centura

HealthTrack (El Paso)

Local MD

Memorial

Local MD

CORHIO Conceptual Connectivity Model – Version 2.0 (12/19/06)

Aiming for diverse HIE services

- **Point of care clinical data exchange (for patient and/or provider)**
  - Aggregation of a pt's clinical health record with information from variety of provider sources (e.g. provider visits, pt. medication lists, allergies, laboratory, radiology, procedures, EKG)
  - Decision support to apply clinical guidelines
- **Clinical messaging (from provider to provider)**
  - Laboratory test orders/results exchange (e.g. to/from CDPHE)
  - ePrescribing
  - Case reporting, electronic laboratory reporting
  - Ancillary/referral service results (e.g., radiology, consultant reports)
- **Population/public health (for provider, payer and/or public health)**
  - Analysis of quality, disparities, morbidity monitoring, pay for performance
  - Registry development and support
  - Bio-surveillance
  - Community health assessments
- **Administrative (for provider and payer)**
  - Claims submission
  - Eligibility, credentialing

CORHIO implementation strategies

- CORHIO organization and operations
  - Governance
    - (Set policies/conditions for participation, monitor adherence)
  - Business arrangements
    - (Establish agreements/practices by CORHIO central and between CORHIO and participating entities)
  - Technical
    - (Promote design/implementation within CORHIO central and participating entities)
  - Guidance/education
    - (Provide training program/materials to promote implementation among participants)
- Culture and HIE environment
  - Public awareness and education
  - Accountability and transparency
    - (Promote community of trust through open and inclusive processes)
  - Public policy
    - (Inform policy makers toward adequate HIE statutory/regulatory framework)
  - Collaborative governance and participation
    - (Maintain participation across sectors via public-private model)

Implementation goals and challenges

Goals
1. Establish core CORHIO operations
2. Build point of care clinical data exchange prototype on schedule (AHRQ contract terms)
3. Expand to support all CORHIO services

Challenges
- Soliciting a range of public and private investments (time,participation, $$)
- Developing a financing plan
- Technology and policy implementation
- Achieving critical mass
  - Getting everyone in under the tent (public/private support and participation)
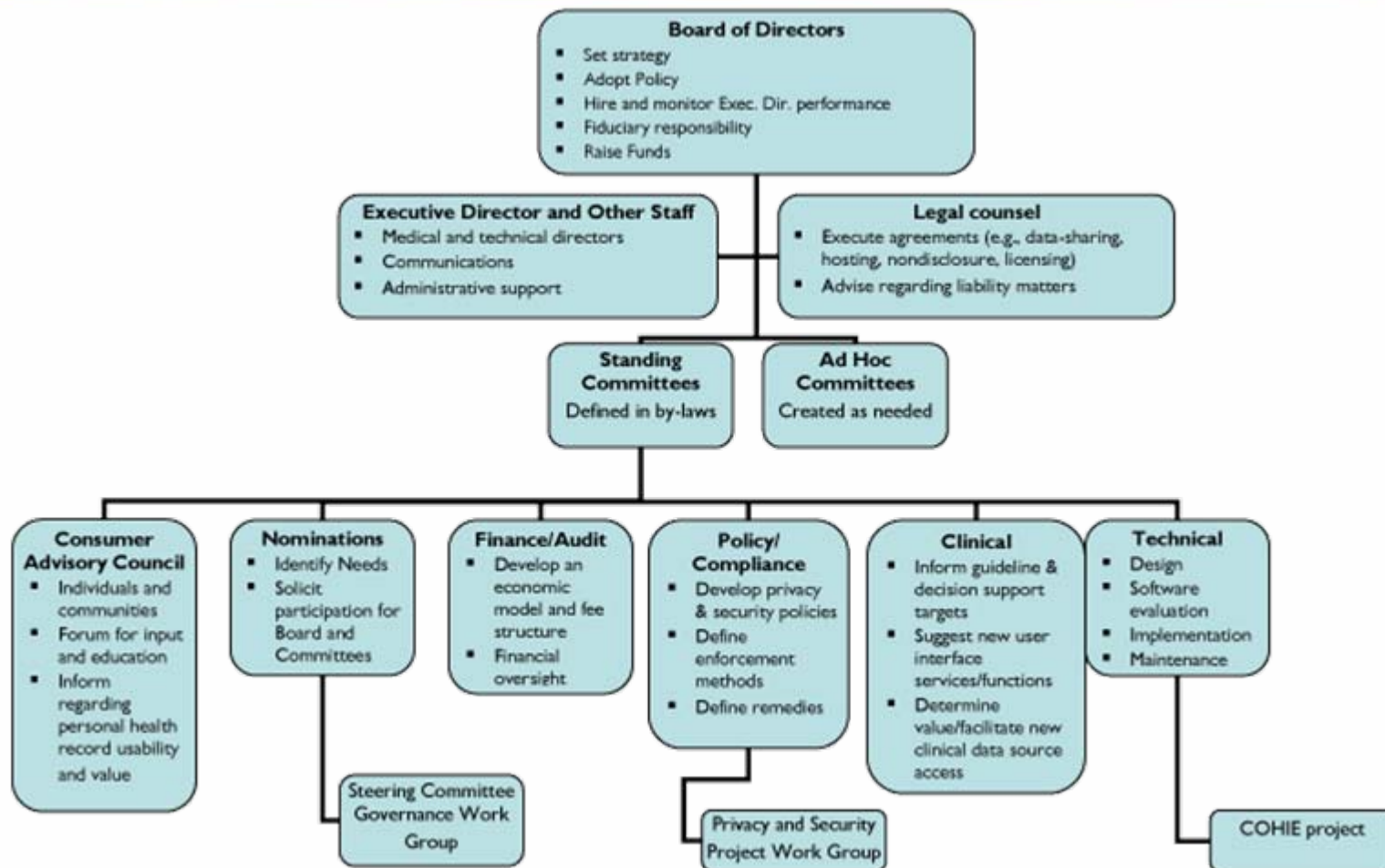
Implementation timeline 2007

April – December
1. Organization & strategic planning
   - Business plan (other services, resources)
     » Privacy and security policy/technical implications
   - Committees/participation
2. Prepare for point of care go-live
   - 1st phase policy development (e.g. authentication, opt-out, security, etc)
   - MPI implementation
3. Production lab data exchange
   - Go live with project partners UCH, DHHA, TCH, KP (Oct 1)
   - Expand participants
     » Consensus for policies, practices
4. Public education/awareness strategies
   - Communication materials
   - Outreach
5. Public policy development
   - Support/participation in Health IT Advisory Committee
   - Statutory/regulatory analysis
   - Other research and dialogue
     » State eHealth Alliance, HISPC part II, State HIE Consensus Project

Progress and key initiatives

- CORHIO
  - It's official – incorporated 3/27/07
  - Board
    - » Donna Lynne, Kaiser Permanente, chair
    - » Agency/executive branch participation (HCPF, CDPHE, State CIO)
    - » Public – private leaders

CORHIO
Colorado Regional
Health Information
Organization

Board of Directors
- Set strategy
- Adopt Policy
- Hire and monitor Exec. Dir. performance
- Fiduciary responsibility
- Raise Funds

Executive Director and Other Staff
- Medical and technical directors
- Communications
- Administrative support

Legal counsel
- Execute agreements (e.g., data-sharing, hosting, nondisclosure, licensing)
- Advise regarding liability matters

Standing Committees
Defined in by-laws

Ad Hoc Committees
Created as needed

Consumer Advisory Council
- Individuals and communities
- Forum for input and education
- Inform regarding personal health record usability and value

Nominations
- Identify Needs
- Solicit participation for Board and Committees

Finance/Audit
- Develop an economic model and fee structure
- Financial oversight

Policy/Compliance
- Develop privacy & security policies
- Define enforcement methods
- Define remedies

Clinical
- Inform guideline & decision support targets
- Suggest new user interface services/functions
- Determine value/facilitate new clinical data source access

Technical
- Design
- Software evaluation
- Implementation
- Maintenance

Steering Committee Governance Work Group

Privacy and Security Project Work Group

COHIE project

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Technical implementation: AHRQ contract terms

By	Year	Topic
Oct 05	1	**COMPLETED - Patient matching prototype**
Oct 06	2	**COMPLETED - Connectivity with "test" data** **(Lab tests related to diabetes)**
Oct 07	3	**IN PROGRESS**: Production data exchange (Lab)
Oct 08	4	Additional data types (EKG, radiology, encounters) Additional partners (CORHIO patrons)
Oct 09	5	Decision Support (CCGC-based guidelines) Population-based analysis (Pay for performance) Personal health record access

Implementation 2008

Jan - June

1. Legislative debate re HIE
   - Statutory/regulatory changes
   - Promoting adoption
   - Public programs
2. HIE service development
   - EKG data exchange
   - Other services
   - Related CORHIO policy formulation
3. Continued R&D
   - Public health exchange
   - Use of data
   - Demonstration pilots e.g. Medicaid?
4. Leadership and technical assistance to promote HIT/HIE capacity
   - Provider/community adoption
   - Expand CORHIO participants

June - December

1. EKG go live data exchange
2. Other HIE

Achieving the promise
of health IT & interoperability

- An array of challenges at various levels
  - Technology implementation
  - Resources
  - Levels of adoption
    » Digital record systems among providers (especially primary care)
    » The ability to share data (expanding CORHIO participation and demonstrating interoperability)

- Emerging issues
  - The value proposition for new infrastructure
    » HIE as "infomediary" and implications for financing
  - Achieving new levels of collaboration
    » Engagement by health plans, business, statewide
    » Institutionalizing the state level HIE organization as a public-private model
  - Changing the way business is done
    » Enabling access to and use of data

Key issues and projects

- Medicaid, CHP+ and HIT
    - AHRQ contract evaluation: benefits/conditions for agency participation in CORHIO
    - Medicaid Transformation Grant application: program/demonstrations to create incentives for providers, achieve cost/quality benefits
- Privacy and security
    - Colorado implementation plan (June – December 07)
- Public health
    - Streamlining public health reporting, registries, etc
    - Benefits/conditions for agency participation in CORHIO
- Provider level implementation
    - Safety net
    - Primary care
- Multi-state collaboration
    - Utah, NM, WY, NE discussions
- Federal – state collaboration
    - State level HIE Consensus Project Steering Committee

Leadership and growing momentum

- **Policy makers**
  - Governor
    - (Colorado Promise)
  - SB 196: Health IT Advisory Committee
    - (Strategic plan, calls for statutory/regulatory study and recommendations for revision, creates mechanism to generate legislative action)
  - SB 74
    - (Information for policy makers via Legislative interim committee hearings (Health Care Task Force), prioritizes HIE for ER/EKG)

- **National level**
  - Privacy and Security Project
    - (Next phase through 2007)
  - State-level HIE Consensus Project
    - (Credentialling criteria, identify "…critical path to data transformation and financial sustainability.")